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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/703,426

10/31/2000

Clarence E. Rash

M-9582US

1385

30465

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05/21/2004

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EXAMINER

LE, BRIAN Q

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/703,426

Applicant(s)

RASH ET AL.

Examiner

Brian Q Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 11-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

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***Election/Restrictions***

1. Applicant's election without traverse of claims 1-10 in Paper No. 10 is acknowledged.

***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

**Arrangement of the Specification**

3. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The organization of the application is not well organized. The Examiner advises the Applicant to strictly followed the MPEP Requirement for filing the application. Appropriate Action is required.

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4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The abstract of the disclosure is objected to because there are at least 3 different abstracts filed by the Applicant. The Applicant only needs to file one abstract per application. Correction is required.

6. INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC. (See 37 CFR 1.52(e)(5) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX". (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

#### *Drawings*

7. The drawing is of insufficient quality for publication (Note handwritten portions). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

8. Figures 1-4, FIG. B11, and FIG. B24 are objected to because of poor quality. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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9. Figures 6A, 6C, and 7-9 are objected because they are not bounded in drawing page's boundary. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas, USAARL Report No. 98-22, "Optical and Biodynamic Evaluation of the Helmet Integrated Display Sight System (HIDSS) for the RAH-66 Comanche Development and Validation Program Phase".

Regarding claim 1, Thomas teaches a method comprising:

Capturing an image actually displayed via a display sighting system (Helmet Integrated Display Sight System, HIDSS) (Introduction);

Computing at least one difference between the captured image and a recalled representation of the image theoretically displayed via the display sighting system; and presenting the computed at least one difference via a visual display device (the computation and presentation of angle difference and overlap) (Introduction).

For claim 2, Thomas further teaches the method wherein said computing at least one difference between the captured image and a recalled representation of the image theoretically displayed via the display sighting system (as discussed in claim 1) further comprises:

Computing at least one angular difference between an angular orientation of the captured image and the recalled representation of the image theoretically display via the display sighting system (as discussed in claim 1);

Computing at east one centering difference between a center point of the captured image and the recalled representation of the image theoretically displayed via the display sighting system (Center of Mass Calculation, bottom of page 2 and top of page 3); or

Computing at least one focus difference between an optical power of the captured image and the recalled representation of the image theoretically displayed via the display sighting system (page 6, first 4 lines and Combiner Power Section, top of page 21).

Referring to claim 3, Thomas discloses the method wherein the recalled representation of the image theoretically displayed via the display sighting system comprises a test pattern having at least one vertical line (Interpupillary distance, IPD, and vertical adjustment or linear Y positioners) (bottom of page 10 and FIG. 12).

For claim 4, Thomas also discloses the method wherein the recalled representation of the image theoretically displayed via the display sighting system comprises a test pattern having at least one horizontal line (Linear X positioners) (Optical characteristic, bottom of page 3).

Regarding claim 5, Thomas further teaches the presenting of the calculations of angular difference (Introduction), centering difference (Table 2) and focus difference (Table 3 and Table 6)) as disclosed in claim 2.

For claim 6, Thomas discloses the method wherein said computing at least one difference between the captured image and a recalled representation of the image theoretically displayed via the display sighting system (as discussed previously) further comprises:

Computing at least one gray-shades-displayed difference between gray shades of the captured image and gray-shades-displayed difference between gray shades of the captured image and gray shades of the recalled representation of the image theoretically displayed via the display sighting system (page 19-20);

Computing at least one field-of-view difference indicated by a difference between a boundary location of the captured image and the recalled representation of the image theoretically displayed via the display sighting system (pages 7-8); or

Computing at least one predicted focus magnitude indicated by a difference between brightness, contrast, and gray level of a captured image and the recalled representation of the image theoretically displayed via the display sighting system (Tables 4-5 and FIG. 15-16).

Regarding to claim 7, Thomas also discloses the method wherein the recalled representation of the image theoretically displayed via the display sighting system comprises a test pattern having at least two gray shades (Pages 19-20 and Tables 4-5).

For claim 8, Thomas teaches the present of the calculations of gray-shades-displayed difference (Pages 19-20, Tables 4-5 and FIG. 15-16), one field-of-view difference (Pages 7-8 and FIG. 7) and one predicted focus magnitude as disclosed in claim 6.

Regarding claim 9, Thomas further teaches the method wherein said capturing an image actually displayed via a display sighting system further comprises capturing the image via a camera (Video Generator) (FIG. 5 and page 6).

*Claim Rejections - 35 USC § 103*

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas, USAARL Report No. 98-22, "Optical and Biodynamic Evaluation of the Helmet Integrated Display Sight System (HIDSS) for the RAH-66 Comanche Development and Validation Program Phase".

For claim 10, Thomas further discloses the method wherein said capturing the image via a camera further comprises:

Capturing the image via a data acquisition card, narrow-angle camera and a portable computer system (page 1, Fig. 1-2 and Fig. 5); or

Capturing the image via a data acquisition card interposed between a wide-angle camera and the portable computer system (page 2-3).

Thomas does clearly disclose a concept of a portable computer system to processing capturing image. However, the Examiner takes Office Notice that portable computer/laptop have being used by one skilled in the art to process capturing image. Therefore, it would have been obvious for one skilled in the art to have a laptop in combine with the teaching of Thomas to process the capturing images the portable flexibility.



### Cited Reference

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to image display and sighting system:

Victor et al., "The Effect of Helmet Mounted Display Field-of-View Configurations on Target Acquisition", U.S. Army Aeromedical Research Laboratory, September 1999.

Thomas et al. "Physical Evaluation of the Integrated Helmet and Display Sighting System (IHADSS) Helmet Display Unit (HDU)", U.S. Army Aeromedical Research Laboratory, August 1995.

WO 01/22149 to Edwards, teaches method for time/motion compensation for head mounted displays.

U.S. Patent No. 5,987,015 to Ishibashi et al., teaches stereoscopic system with convergence and dioptric power adjustments according to object distance.

U.S. Patent No. 5,841,409 to Ishibashi et al., teaches Image display apparatus.

Bohm, "Helmet Mounted Sight and Display Testing", SPIE Vol. 1456 pages: 95-123, Large-Screen-Projection, Avionic, and Helmet-Mounted Displays, 1991.

Clarence, "A characterization of IHADSS Performance", SPIE Vol. 2735, pages. 164-180, The International Society for Optical, 1996.

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*CONCLUSION*

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC Customer Service whose telephone number is 703-306-0377.

BL  
May 14, 2004

A handwritten signature in black ink, appearing to read 'SAMIR AHMED', with a long horizontal flourish extending to the right.

**SAMIR AHMED  
PRIMARY EXAMINER**